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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,853	02/19/2004	Shrjie Tzeng	0063-106001/BU3034	2472
57346 7590 08/04/2011 BRAKE HUGHES BELLERMANN LLP c/o CPA Global P.O. Box 52050 Minneapolis, MN 55402				
EXAMINER				
JOO, JOSHUA				
ART UNIT		PAPER NUMBER		
2445				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/780,853

Applicant(s)

TZENG ET AL.

Examiner

JOSHUA JOO

Art Unit

2445

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-2, 4, 6-9, 11-15, 17-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 4, 6, 7, 14, 15, 17-20 and 22 is/are allowed.
- 6) ☒ Claim(s) 8, 9, 11-13 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-944)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

This Office action is in response to Applicant's communication filed on July 21, 2011.

Claims 1-2, 4, 6-9, 11-15, 17-22 are pending in the application.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on July 21, 2011 has been entered.

Allowable Subject Matter

Claims 1-2, 4, 6-7, 14-15, 17-20, and 22 are allowed.

35 USC § 112 Sixth Paragraph

Claim 8's limitation of "lookup means for performing a lookup", "determining means for determining", and "relaying means for relaying" and claim 13's limitation of "means for determining an egress port" invoke 35 USC § 112, ¶ 6 because the limitations meets the 3-prong analysis set forth in MPEP 2181 as it recites the phrase "means for" or "step for", the phrase is modified by functional language, and it is not modified by sufficient structure, material, or acts for performing the recited function. 35 USC § 112, ¶ 6, requires such a claim to be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what

is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.” In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc). MPEP 2181.

After a review of Applicant’s specification, the structure, material, or acts for the “relaying means” is considered as a 10/100 BASE-TX transceiver that complies with the IEEE 802.3 802.3u and 802.3x specifications (Paragraph 0021); the structure, material, or acts for the “determining means” is considered as a processor implementing an algorithm of setting and checking a learned_all_devices tag in the ARL table, the tag used to tell the receiving port logic that the corresponding MAC address has been learned by all connected network devices (Paragraph 0037 and 0038); and the structure, material, or acts for the “means for determining an egress port” is considered as a processor implementing an algorithm of performing a lookup of the ARL table with the destination address, comparing the destination address with entries of the ARL table, and matching the destination address with an entry to identify an egress port (Paragraph 0026).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-9, 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Regarding claim 8, “the incoming datagram” has insufficient antecedent basis.
- b) The claim recites the limitations of “lookup means for performing a lookup”, “determining means for determining”, and “relaying means for relaying”. However, the instant

specification does not sufficiently describe the structure, material, or acts for performing the “lookup means for performing a lookup”.

The limitation invokes 35 USC § 112, ¶ 6 because it meets the 3-prong analysis set forth in MPEP 2181 as it recites the phrase “means for” or “step for”, the phrase is modified by functional language, and it is not modified by sufficient structure, material, or acts for performing the recited function. Also see *Altiris Inc. v. Semantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003). 35 USC § 112, ¶ 6, requires such claim to be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. “If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section § 112.” *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ 1845, 1850 (Fed. Cir. 1994)(in banc.). For a computer-implemented means-plus-function claim limitation that invokes 35 USC § 112, ¶ 6, the corresponding structure is required to be more than simply a general purpose computer. *Aristocrat Technologies, Inc. v. International Game Technology*, 521 F.3d 1328, 1333, 86 USPQ2d 1235, 1239-40 (Fed. Cir. 2008). The corresponding structure for a computer-implemented function must include the algorithm as well as the general purpose computer. *WMS Gaming, Inc. v. International Game Technology*, 184 F.3d 1339, 51 USPQ2d 1385 (Fed. Cir. 1999). The written description must at least disclose the algorithm that transforms the general purpose microprocessor to a special purpose computer programmed to perform the claimed function. *Aristocrat*, 521 F.3d at 1338, 86 USPQ2d at 1242.

The sections of the instant specification that appear most relevant and correspond to the steps of the claim are:

“The present invention is directed to a network device and methods that allow for datagrams to be efficiently forwarded through the computer network through the use of multiple network devices connected together. The processor and methods described provide for a scheme that allows for synchronization of Address Resolution Logic (ARL) tables, where those tables are used to determine an egress port for the datagrams, that does not require extra bandwidth or memory buffer allocation.” (Paragraph 0007)

“Then, a lookup in the ARL table is performed for the source address 206 to determine whether the source address has already been learned 207. If the source address has been previously learned, then the hit bit for that entry is updated for that entry in the ARL table 208. If the source address has not already been learned, then an entry is made in the ARL table for the source address 209. Additionally, learning messages are sent out so that other network devices connected can also learn the source address 210.” (Paragraph 0026).

“Therefore, when the corresponding learning message has arrived at the device originating the message, it is understood that the MAC address has been properly learned. Thus, the originating device can stop sending the corresponding learning message. In part, this can be accomplished by setting a learned all devices tag in the ARL table. This tag is used to tell the receiving port logic that the corresponding MAC address has been learned by all connected network devices, and thus, that no learning message need be sent regarding the MAC address.” (Paragraphs 0036-0037)

“Then, a lookup in the ARL table is performed for the source address 506 to determine whether the source address has already been learned 507. If the source address has been previously learned, then the hit bit for that entry is updated for that entry in the ARL table 508. If the source address has not already been learned, then an entry is made in the ARL table for the source address 509.” (Paragraph 0038)

“If all of the connected devices have learned the address, then the flow continues to await the next frame. If all connected network devices have not learned the address, then the learning message continues to be sent 510, where learning messages are also sent out after step 509 so that other network devices connected can also learn the source address.” (Paragraph 0039)

(Underlined for emphasis)

As shown above, the specification discloses a general processor and recites substantially similar claim language without a description of the algorithm to implement the step. Regarding the step of “lookup means for performing a lookup of the ARL table based on a source address...”, the specification discloses that a lookup in the ARL table is performed for the source address. However, the specification does not disclose an algorithm for performing the lookup and how the general processor is programmed to perform the lookup in the ARL table based on the source address.

Conclusion

A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7:30AM to 4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Andrew Caldwell can be reached on 571 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2445

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Joshua Joo/
Primary Examiner, Art Unit 2445